Walker Lake is a perennial, natural terminal lake that became at-risk because of upstream agricultural diversions. Between 1882 and 1994, upstream diversions caused Walker Lake to decline about 140 feet and the total dissolved solids (TDS) concentrations to increase from 2,500 mg/L to 13,300 mg/L. The Lahontan cutthroat trout (LCT), a threatened species that is native to Walker Lake, has adapted to the high TDS of terminal basins. However, diversions have lowered lake levels and increased TDS to concentrations that threaten the survival of the LCT. The objectives of this project are to develop (1) an improved water budget for Walker Lake and (2) the capability to predict how changes in irrigation practices in and below Mason Valley will affect flows in the lower Walker River so alternatives for supplementing flows can be evaluated.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Station number	Station name	Date	Time	Sample type	Instantaneous discharge, cfs (00061)
10293500	EAST WALKER RIVER ABOVE STROSNIDER DITCH NEAR MASON, NV	03-08-04	1200	Environmental	33
10300000	WEST WALKER RIVER NEAR HUDSON, NV	03-08-04	0950	Environmental	45
10301500	WALKER RIVER NEAR WABUSKA, NV	03-08-04	1430	Environmental	24
		03-08-04	1435	**Replicate**	--
10301600	WALKER RIVER ABOVE WEBER RESERVOIR NEAR SCHURZ, NV	03-08-04	1715	Environmental	21
		03-08-04	1850	**Blank**	--
10301720	WALKER RIVER AT PT SITE BELOW WEBER RESERVOIR NEAR SCHURZ, NV	03-09-04	0900	Environmental	2.6
10302002	WALKER RIVER AT LATERAL 2-A SIPHON NEAR SCHURZ, NV	03-09-04	1130	Environmental	.52
10302005	WALKER RIVER AT POWERLINE CROSSING NEAR SCHURZ, NV	03-09-04	1400	Environmental	1.2
10302025	WALKER RIVER NEAR MOUTH AT WALKER LAKE	03-09-04	1640	Environmental	1.7

Date	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)
03-08-04	652	10.5	113	7.4	350	18.0	11.6	31.6	7.15	4.67	32.6	117	145
03-08-04	652	10.3	93	7.5	503	14.0	9.0	40.5	10.3	4.35	52.9	150	183
03-08-04	657	8.5	107	7.5	484	--	19.0	39.2	9.24	5.08	52.1	147	179
03-08-04	--	--	--	--	--	--	--	*38.3*	*9.10*	*4.98*	*50.4*	--	--
03-08-04	659	9.1	101	7.4	455	--	13.3	36.9	8.95	4.62	46.3	150	182
03-08-04	--	--	--	--	--	--	--	*.02*	*<.008*	*<.16*	*<.10*	--	--
03-09-04	660	6.2	64	7.6	511	--	10.5	36.6	8.17	4.99	62.8	190	232
03-09-04	659	6.6	72	7.5	552	--	12.4	46.5	11.3	5.81	59.1	191	233
03-09-04	658	6.3	75	7.6	629	--	16.7	55.0	14.1	8.69	61.4	209	255
03-09-04	660	7.7	93	8.1	1,040	--	17.1	42.8	12.8	11.7	168	271	338

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
03-08-04	7.09	.5	20.4	44.3	225	57	115
03-08-04	34.2	.9	20.5	45.1	308	12	140
03-08-04	25.0	.8	19.9	56.1	301	E5	19.2
03-08-04	*25.4*	*.8*	*19.6*	*55.9*	*302*	*E4*	*18.5*
03-08-04	20.8	.8	13.9	48.4	278	10	344
03-08-04	*<.20*	*<.2*	*<.04*	*<.2*	*<10*	*<6*	*.9*
03-09-04	19.8	.8	25.6	44.1	320	E6	985
03-09-04	22.2	.7	14.6	53.2	341	7	178
03-09-04	24.9	.6	32.1	77.7	404	E6	63.4
03-09-04	64.5	1.9	31.2	152	666	20	78.4

Remark codes used in this table:
< -- Less than
E -- Estimated value